



Water-Data Report 2008

01391500 SADDLE RIVER AT LODI, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 40°53'25", long 74°04'50" referenced to North American Datum of 1983, Lodi Borough, Bergen County, NJ, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi, 1.3 mi south of Rochelle Park, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--54.6 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1923 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WDR NJ-1969: 1967. WDR NJ-1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov 2, 1938. Datum of gage is 25.00 ft above NGVD of 1929. Prior to Nov 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Diurnal fluctuations at low flow due to patterns of sewage effluent entering river upstream. Diversion upstream from station at Paramus by United Water New Jersey, for municipal supply (see 01390520). The flow past this station is affected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 24	0315	1,300	5.11
Feb 13	1815	1,920	6.41
Mar 8	2200	1,290	5.08
Sep 7	0415	*2,630	*7.77

Water-Data Report 2008

01391500 SADDLE RIVER AT LODI, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[*e*, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	31	57	53	214	357	171	153	107	77	51	34	33
2	30	53	54	165	461	154	202	119	70	37	154	31
3	30	50	121	116	142	139	132	107	65	37	99	29
4	31	49	73	103	112	208	212	107	141	60	51	30
5	30	45	57	98	127	413	167	101	81	183	38	34
6	30	80	51	105	129	218	136	93	70	73	403	505
7	30	55	45	98	123	209	126	90	67	59	120	1,090
8	30	47	45	94	96	680	120	88	83	54	64	141
9	48	47	52	92	93	454	118	220	75	40	50	183
10	151	73	91	84	109	232	116	279	76	54	47	142
11	115	57	59	e160	90	202	109	125	89	36	e82	90
12	294	48	49	e145	84	192	186	114	62	32	e56	108
13	80	64	57	e125	1,090	177	127	93	56	35	42	134
14	55	53	77	e165	432	170	111	85	95	123	32	84
15	42	105	58	e145	215	178	105	81	182	48	119	72
16	39	92	73	e125	180	161	100	229	98	32	121	65
17	31	60	76	e120	160	149	98	297	135	34	56	60
18	32	54	52	e180	e390	142	97	147	79	39	43	57
19	53	52	48	e145	e245	288	94	128	89	35	38	54
20	135	55	57	e125	e180	360	90	123	65	35	36	52
21	57	53	53	e100	e155	193	90	141	89	36	32	50
22	43	47	52	e75	e160	166	88	106	156	34	32	49
23	40	52	269	82	e160	154	86	95	141	99	37	47
24	41	47	588	81	e150	146	85	88	68	387	37	46
25	48	46	160	76	e155	141	81	82	53	91	36	43
26	54	147	132	73	e190	137	80	79	49	49	33	400
27	560	179	268	72	250	132	80	104	47	101	33	129
28	187	82	138	67	167	137	156	114	47	98	28	116
29	86	59	321	57	138	129	245	79	61	48	28	181
30	62	54	167	77	---	119	129	72	61	42	54	91
31	51	---	240	65	---	127	---	72	---	32	35	---
Total	2,546	1,962	3,636	3,429	6,340	6,478	3,719	3,765	2,527	2,114	2,070	4,146
Mean	82.1	65.4	117	111	219	209	124	121	84.2	68.2	66.8	138
Max	560	179	588	214	1,090	680	245	297	182	387	403	1,090
Min	30	45	45	57	84	119	80	72	47	32	28	29

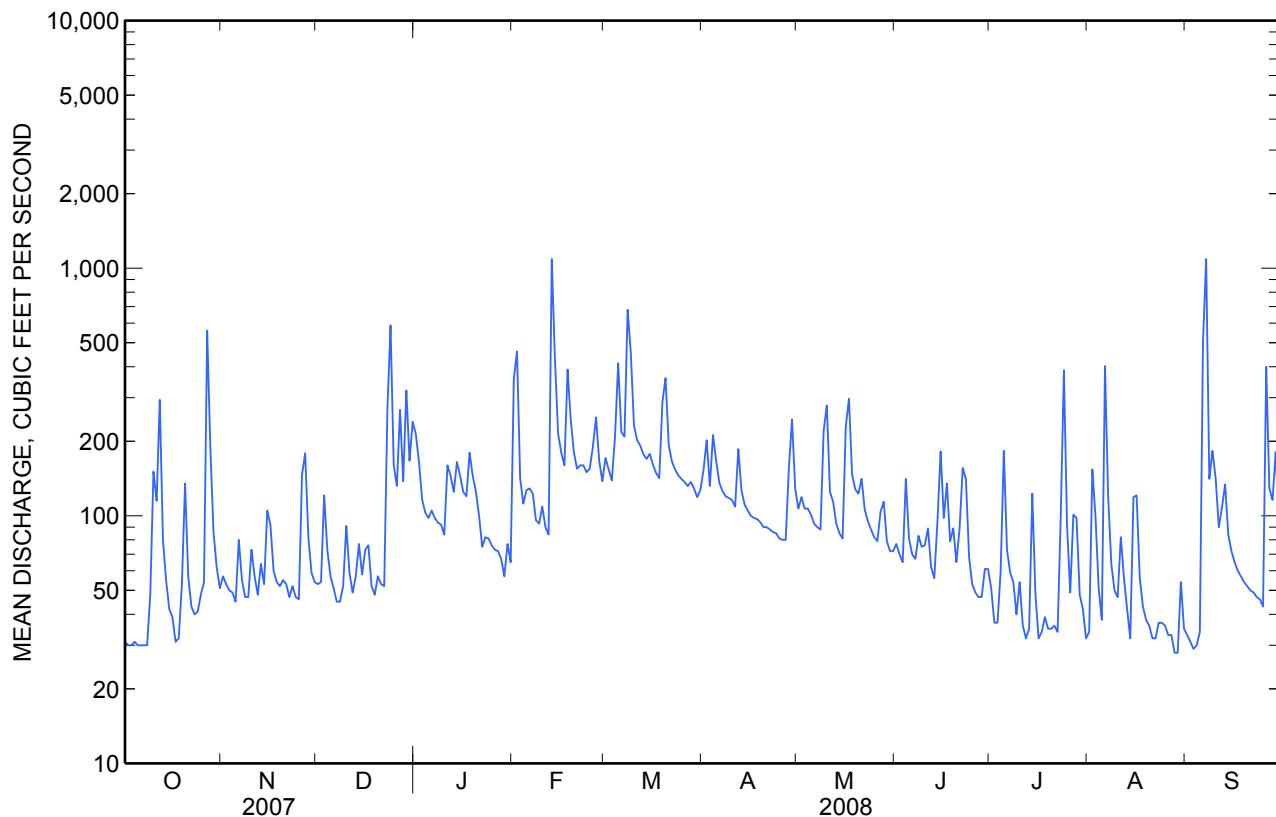
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	70.8	90.4	103	108	118	154	156	116	88.9	73.2	69.0	72.0
Max	352	284	301	331	258	333	457	315	336	371	225	256
(WY)	(2006)	(1978)	(1984)	(1979)	(1973)	(1953)	(1983)	(1984)	(1972)	(1945)	(1955)	(1971)
Min	16.5	25.5	17.0	12.1	26.0	40.1	32.9	44.9	25.5	12.9	15.1	11.4
(WY)	(1936)	(1982)	(1981)	(1981)	(2002)	(1981)	(1985)	(1941)	(1999)	(1999)	(1966)	(1932)

01391500 SADDLE RIVER AT LODI, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2007	Water Year 2008			Water Years 1924 - 2008	
Annual total	43,938		42,732			
Annual mean	120		117		101	
Highest annual mean					187	1984
Lowest annual mean					45.2	1981
Highest daily mean	3,790	Apr 16	1,090	Feb 13, Sep 7	3,790	Apr 16, 2007
Lowest daily mean	26	Aug 5	28	Aug 28-29	4.9	Sep 15, 1995
Annual seven-day minimum	30	Oct 2	30	Oct 2	7.1	Sep 10, 1995
Maximum peak flow			2,630	Sep 7	5,330	Sep 17, 1999
Maximum peak stage			7.77	Sep 7	^a 13.94	Sep 17, 1999
Instantaneous low flow			22	Oct 5, Sep 3	1.0	May 25, 1935
10 percent exceeds	194		204		192	
50 percent exceeds	73		88		70	
90 percent exceeds	38		37		27	

^a From high-water mark in gage house.



01391500 SADDLE RIVER AT LODI, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--Water years 2000-02, 2008.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 4. The accuracy of continuous water-quality data is routinely verified through inspections for fouling and calibration drift. The New Jersey Water Science Center requires that either constant or prorated adjustments be made to the continuous water-quality record when the difference between a sensor's response and a known value exceeds the following criteria: Water Temperature, 0.2 degrees Celsius (+ or -); Specific Conductance, the greater of 5 microsiemens/cm (+ or -) or 3% of the measured value; Dissolved Oxygen, the greater of 0.3 mg/L (+ or -) or 5% of the measured value; pH, 0.3 units (+or-). If the difference between a sensor's response and a known value is within specified criteria, the data are considered to be reliable and are not adjusted. Data from the following period(s) were adjusted - SPECIFIC CONDUCTANCE: Jul 9-14 and Aug 11-13; DISSOLVED OXYGEN: Jul 9-14 and Aug 9-13.

COOPERATION.--Physical measurements and samples for laboratory analyses on Nov 15, Feb 21, Jun 10, and Aug 12 were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia on those dates, dissolved orthophosphate, suspended residue, ammonia-plus-organic nitrogen in bed sediment, and phosphorus in bed sediment on Aug 12 were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 1 of 4

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	Instan- taneous dis- charge, ft ³ /s (00061)	Turbdty white light, det ang 90+/-30 corrctd	UV absorb- ance, 254 nm, wat flt units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)
Nov									
15...	1100	Surface water, regular	64	6.4	.115	.089	746	8.1	75
Feb									
20...	0959	<i>QC - Artificial, field blank</i>	--	--	--	--	--	--	--
20...	1020	Surface water, regular	E180	4.4	--	--	761	12.0	92
21...	1000	Surface water, regular	E155	2.9	.100	.076	772	12.3	94
Apr									
01...	1150	Surface water, regular	157	3.6	--	--	756	10.4	94
28...	1240	Surface water, regular	152	9.2	--	--	756	8.7	82
Jun									
10...	1030	Surface water, regular	59	1.7	.111	.084	758	5.3	64
26...	1009	<i>QC - Artificial, field blank</i>	--	--	--	--	--	--	--
26...	1030	Surface water, regular	44	3.2	--	--	758	6.5	74
Jul									
17...	0940	Surface water, regular	30	3.3	--	--	764	5.9	68
24...	1440	Surface water, regular	325	26	--	--	758	7.4	86
Aug									
05...	1220	Surface water, regular	34	3.4	--	--	760	8.3	98
12...	1030	Surface water, regular	E56	2.1	.109	.081	756	7.3	80
21...	1100	Surface water, regular	33	2.8	--	--	768	8.6	94
Sep									
08...	1130	Surface water, regular	135	7.3	--	--	759	7.3	80
19...	0900	Surface water, regular	51	2.1	--	--	773	8.2	83

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 4

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Specif-										ANC,		
	pH, water, unfltrd field, std units (00400)	conduc- tance, wat unf μS/cm (00095)	Temper- ature, wat unf deg C (25 degC (00020)	Temper- ature, air, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	Calcium water, filtrd, mg/L (00900)	Magnes- ium, water, filtrd, mg/L (00915)	Potas- sium, water, filtrd, mg/L (00935)	Sodium, water, filtrd, mg/L (00930)	fixed end pt, lab, mg/L as CaCO ₃ (90410)	Chlor- ide, water, filtrd, mg/L (00940)	Fluor- ide, water, filtrd, mg/L (00950)	Silica, water, filtrd, mg/L as SiO ₂ (00955)
Nov 15...	7.6	818	10.9	11.4	210	56.4	16.1	5.24	67.6	129	140	E.09	13.6
Feb 20...	--	--	--	--	--	--	--	--	--	<6	<.12	--	--
20...	7.5	742	2.0	4.1	--	--	--	--	--	98	149	--	--
21...	7.7	807	7.3	3.7	170	50.0	11.8	2.88	81.2	107	152	E.06	11.0
Apr 01...	7.5	772	17.0	10.7	--	--	--	--	--	118	146	--	--
28...	7.6	753	12.0	12.9	--	--	--	--	--	119	143	--	--
Jun 10...	7.5	861	29.3	24.7	220	59.7	16.8	5.53	76.0	134	156	E.07	13.6
26...	--	--	--	--	--	--	--	--	--	<6	<.12	--	--
26...	7.5	895	23.0	20.8	--	--	--	--	--	135	163	--	--
Jul 17...	7.5	911	29.0	22.3	--	--	--	--	--	130	168	--	--
24...	7.4	298	30.5	23.3	--	--	--	--	--	49	46.3	--	--
Aug 05...	7.7	859	29.0	23.2	--	--	--	--	--	128	161	--	--
12...	7.6	692	24.0	19.2	180	50.8	13.8	4.19	61.5	117	118	E.09	9.8
21...	7.7	930	26.0	19.6	--	--	--	--	--	137	170	--	--
Sep 08...	7.4	517	22.0	21.1	--	--	--	--	--	84	86.6	--	--
19...	7.6	831	19.0	15.8	--	--	--	--	--	126	147	--	--

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 4

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue on evap. 180degC wat flt mg/L (70300)	Residue total non- filter- able, mg/L (00530)	Ammonia + org-N, water, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, susp., water, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd, mg/L (00600)	Ortho- phosphate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L as P (00666)
Nov													
15...	27.8	E435	453	7	.86	--	.315	6.35	.14	7.2	7.4	.930	.96
Feb													
20...	--	--	<10	--	--	<.14	<.020	<.04	--	--	--	--	<.02
20...	--	--	401	8	--	.53	.051	2.93	--	--	3.5	--	.21
21...	22.5	E412	417	6	.44	--	.049	3.35	.11	3.8	3.9	.235	.25
Apr													
01...	--	--	439	3	--	.54	.037	3.44	--	--	4.0	--	.29
28...	--	--	467	15	--	1.1	.181	3.60	--	--	4.7	--	.40
Jun													
10...	25.2	E459	512	6	1.0	--	.325	5.16	.10	6.2	6.3	.839	.86
26...	--	--	<10	--	--	<.14	<.020	E.03	--	--	--	--	E.01
26...	--	--	509	2	--	.76	.123	6.18	--	--	6.9	--	1.00
Jul													
17...	--	--	525	5	--	.68	.062	6.44	--	--	7.1	--	1.19
24...	--	--	185	40	--	.92	.044	1.46	--	--	2.4	--	.24
Aug													
05...	--	--	485	2	--	.60	.037	4.93	--	--	5.5	--	.91
12...	21.8	E368	395	2	.50	--	.018	3.65	.07	4.1	4.2	.582	.57
21...	--	--	526	1	--	.61	.022	7.01	--	--	7.6	--	1.27
Sep													
08...	--	--	302	13	--	.79	.068	2.21	--	--	3.0	--	.25
19...	--	--	502	5	--	.54	.044	7.11	--	--	7.6	--	.86

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 4

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Phos-phorus, water, unfiltrd mg/L as P (00665)	Total carbon, suspnd total, (00694)	Inor-ganic carbon, suspnd total, (00688)	Organic carbon, suspnd total, (00689)	Organic carbon, water, filtrd, mg/L (00681)	Organic carbon, water, unfiltrd, mg/L (00680)	Chloro-phyll a, phyto-plank-ton, fluoro, µg/L (70953)	Pheo-phytin a, phyto-plank-ton, filtrd, µg/L (62360)	Boron, water, unfiltrd recover-able, µg/L (01020)	Boron, water, unfiltrd recover-able, µg/L (01022)	Iron, water, unfiltrd recover-able, µg/L (01045)
Nov											
15...	1.00	1.1	<.04	1.1	3.8	--	--	--	100	--	--
Feb											
20...	<.02	--	--	--	--	E.3	<.1	<.1	--	<8	<6
20...	.25	--	--	--	--	5.0	3.6	1.8	--	47	336
21...	.29	.8	<.04	.8	3.0	--	--	--	51	--	--
Apr											
01...	.34	--	--	--	--	4.5	23.6	11.8	--	66	323
28...	.50	--	--	--	--	7.4	28.0	17.5	--	73	726
Jun											
10...	.96	.9	<.04	.9	3.9	--	--	--	97	--	--
26...	<.02	--	--	--	--	.4	--	--	--	<8	<6
26...	1.09	--	--	--	--	4.9	1.6	2.0	--	100	233
Jul											
17...	1.16	--	--	--	--	5.2	1.8	2.8	--	122	237
24...	.42	--	--	--	--	9.1	10.6	9.3	--	39	1,100
Aug											
05...	.96	--	--	--	--	5.2	2.9	3.0	--	108	228
12...	.62	.5	<.04	.5	3.7	--	--	--	75	--	--
21...	1.31	--	--	--	--	5.1	2.4	3.0	--	137	158
Sep											
08...	.32	--	--	--	--	7.4	6.8	3.8	--	55	535
19...	.93	--	--	--	--	4.2	1.1	1.5	--	97	142

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	pH bed sedimnt std units (70310)	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Phos-phorus, bed sedimnt total, mg/kg as P (00668)	Total carbon, bed sed <2 mm, wsv nat field g/kg (49272)	Inorg. carbon, bed sed <2 mm, wsv nat total, g/kg (00693)	Inorg- ganic carbon, bed sedimnt wsv nat field g/kg (49270)	Organic carbon, bed sed <2 mm, wsv nat total, g/kg (00686)	Arsenic bed sedimnt recover -able, ug/g (49271)	Cadmium bed sedimnt recover -able, ug/g (64847)	Chrom- ium, bed sedimnt recover -able, ug/g (01028)	Cobalt bed sedimnt recover -able, ug/g (01038)
Aug												
12...	1030	7.00	140	1,800	--	1.8	--	<.2	--	.6	.050	5.2
Sep												
23...	1220	--	--	270	1.3	--	<.2	--	1.3	--	--	--
25...	1010	--	--	310	1.4	--	<.2	--	1.3	--	--	--

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total digest, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)	Mangan- ese, bed sedimnt recover -able, ug/g (01053)	Mercury bed sedimnt recover -able, ug/g (71921)	Nickel, bed sedimnt recover -able, ug/g (01068)	Selen- ium, bed sedimnt recover -able, ug/g (64848)	Zinc, bed sedimnt recover -able, ug/g (01093)	1,2-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49403)	1,6-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49404)	1Methyl -9H- fluor- ene, bed sed <2 mm, ug/kg (49398)	1-Methyl- phenan- threne, bed sed <2 mm, ug/kg (49410)	1- Methyl- pyrene, wsv nat <2 mm, ug/kg (49388)
Aug 12...	5	4,800	6.8	89	<.007	3.7	<.1	59	<50	E2	E4	E11	E10
Sep 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
Sep 25...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	236Tri- methyl- naphth- alene, bed sed <2 mm, ug/kg (49405)	2,6-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49406)	2-Ethyl naphth- alene, bed sed <2 mm, ug/kg (49948)	2- Methyl- anthra- cene, bed sed <2 mm, ug/kg (49435)	4H-Cyc- lopenta phenan- threne, bs <2mm wsv nat ug/kg (49411)	9H- Fluor- [def]- ene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace- naphth- ene, bed sed <2 mm, wsv nat ug/kg (49429)	Ace- naphth- ene, bed sed <2 mm, wsv nat ug/kg (49428)	Anthra- cene, bed sed <2 mm, wsv nat field, ug/kg (49434)	Benzo- [a]- anthra- cene, bed sed <2 mm, wsv nat ug/kg (49436)	Benzo- [a]- pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzo- [b]- fluori- anthene, bed sed <2 mm, ug/kg (49458)	Benzo- [ghi]- peryl- ene, bed sed <2 mm, ug/kg (49408)
Aug 12...	E3	E3	<50	E8	E16	E8	E5	E8	E20	69	73	100	E50
Sep 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
Sep 25...	--	--	--	--	--	--	--	--	--	--	--	--	--

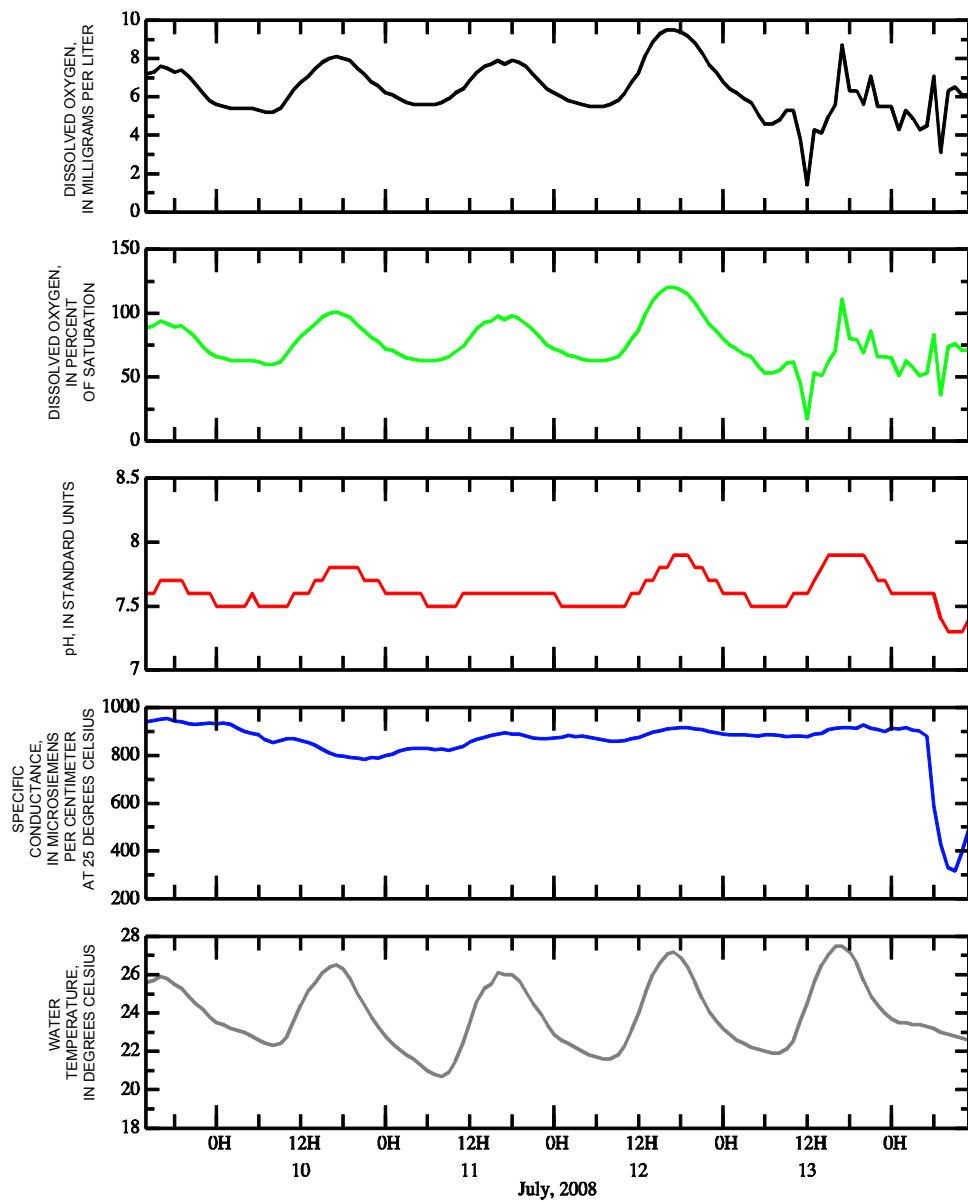
WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 4

[Remark codes: <, less than; E, estimated.]

Date	Benzo- [k]- fluor- anthene, bed sed <2 mm, ug/kg (49397)	Chry- sene, bed sed <2 mm, ug/kg (49450)	Dibenzo -[a,h]- anthra- cene, bed sed <2 mm, ug/kg (49461)	Fluor- anthene, bed sed <2 mm, ug/kg (49466)	Indeno- [1,2,- 3-cd]- pyrene, bed sed <2 mm, ug/kg (49390)	Iso- phorone, bed sed <2 mm, ug/kg (49400)	Naphth- alene, bed sed <2 mm, ug/kg (49402)	PCBs, bed sediment (39519)	p- Cresol, bed sed <2 mm, ug/kg (49451)	Phenan- threne, bed sed <2 mm, ug/kg (49409)	Phenan- threne, bed sed <2 mm, ug/kg (49393)	Pyrene, bed sed <2 mm, ug/kg (49387)	Bed sedi- ment, dry svd sve dia percent <62.5um (80164)
Aug 12...	E43	73	<50	170	E46	<50	E2	E3.89	<50	86	E6	140	.3
Sep 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
Sep 25...	--	--	--	--	--	--	--	--	--	--	--	--	--

01391500 SADDLE RIVER AT LODI, NJ—Continued

HOURLY WATER-QUALITY-MONITOR VALUES
JULY 9, 2008 TO JULY 14, 2008

01391500 SADDLE RIVER AT LODI, NJ—Continued

HOURLY WATER-QUALITY-MONITOR VALUES
AUGUST 9, 2008 TO AUGUST 13, 2008